

US EPA ARCHIVE DOCUMENT

CONAE-National Commission on Space Activities

- **CONAE is a specialized agency created in May 1991 to be in charge of national space activities**
- **It is now under the authority of the Ministry of Foreign Affairs, International Trade and Worship**
- **It has a Strategic Plan: the National Space Program, issued in 1995 and revised periodically, the latest version is 2004-2015.**



The National Space Program

The Space Program particularly emphasizes the use and scope of the concept of “*Space Information Cycle*”.

It comprises the set of information from space which, together with information from other sources, will have a relevant impact on certain socioeconomic activities within the country.

So far, six Information Cycles have been defined in topics such as agriculture, forestry, hydrology, climate, oceanography, cartography, emergency management, geology and health applications.



Certainly, this is not a pure science approach, however it is mostly coincident with GEO.

In the frame of this approach, the 2004-2015 revision of the National Space Program calls for three series of satellites. The first two for global Earth observation



Satellite Systems

The National Space Program provides for two satellite series, depending on the main instruments they carry on board.

SAC Series

Instruments centered on the optical range and passive microwave range.

SAOCOM Series

Instruments centered on the active microwave range (SAR).



**And a third series, of small satellites,
for very special purposes,
for both technological
or Earth science objectives.**

**As an example of the first
two satellites series
we may refer to:**

SAC-C FIRST ARGENTINE EARTH OBSERVATION SATELLITE

9 instruments:
MMRS, HSTC, HRTC, DCS
GOLPE, MMP
IST, INES
ICARE

Satellite weight: 475 kg

Size: 1,85 m x 1,68 m x 2,2 m

Orbit altitude: 705 km

Orbit type: quasi polar – Sun synchronous

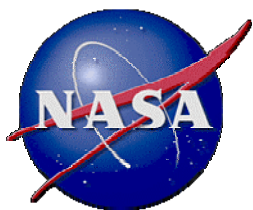
Inclination: 98.21 degrees

Pass over the Equator: 10.15 AM (+/- 6 minutes)

Revisit: 16 days, with 7-9 days subcycles

Launched on November 21, 2000

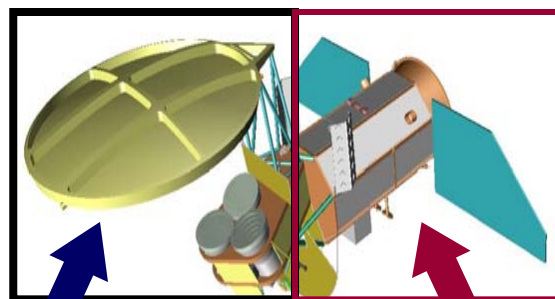




Partnership AQUARIUS/SAC-D



International Partnership Mission



- Aquarius Salinity Microwave Instrument
- Launch Vehicle

- Service Platform and SAC-D Science Instruments
- Mission Operations & Ground System

Aquarius/SAC-D

Ocean circulation, global water cycle,
climate interaction, environmental
changes, natural hazards, atmospheric
parameters, radiation effects

8 instruments:
Aquarius, MWR, NIRST, HSC, ROSA,
CARMEN 1, DCS, TDP



Satellite weight: 1600 kg

Orbit altitude: 657 km

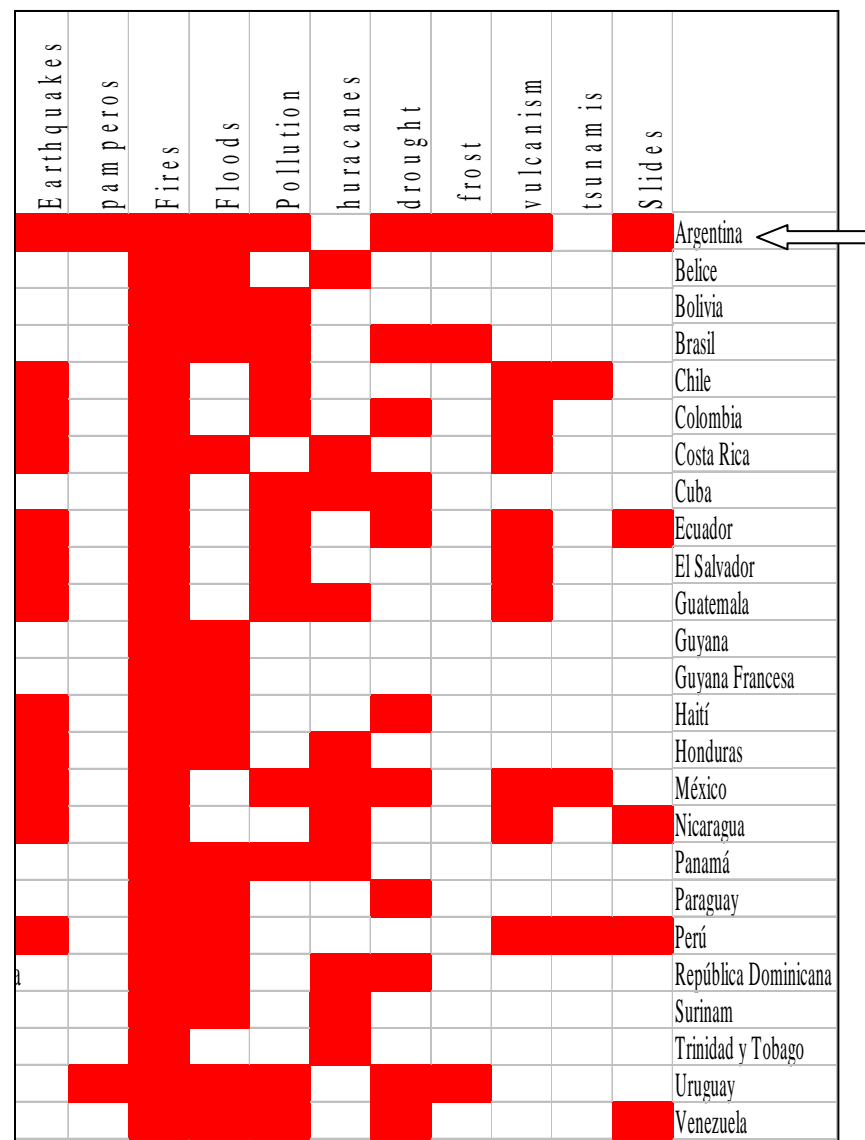
Orbit type: quasi polar – Sun synchronous

Inclination: 98.21 degrees

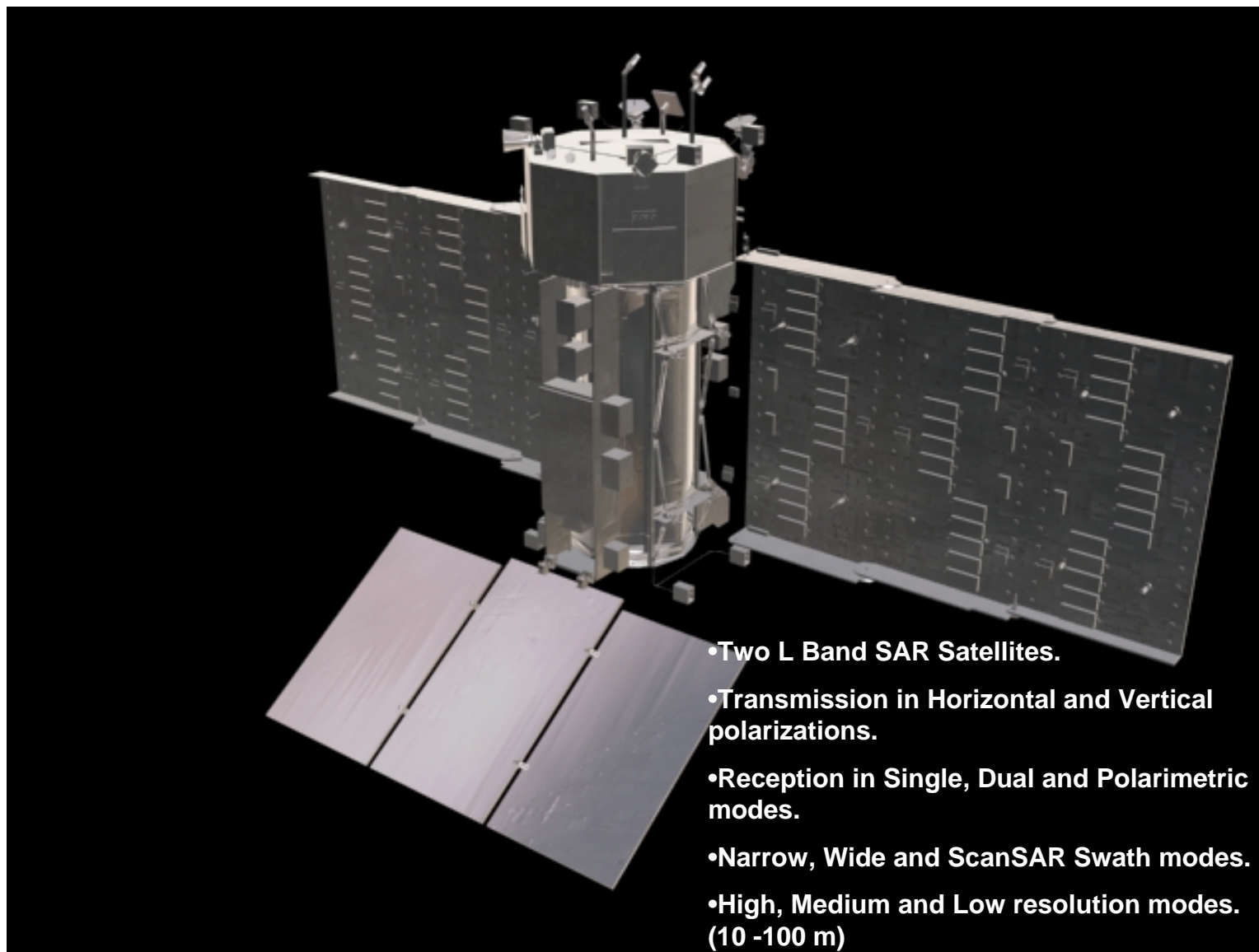
Pass over the Equator: 6 PM ascending node

Revisit: 7 days

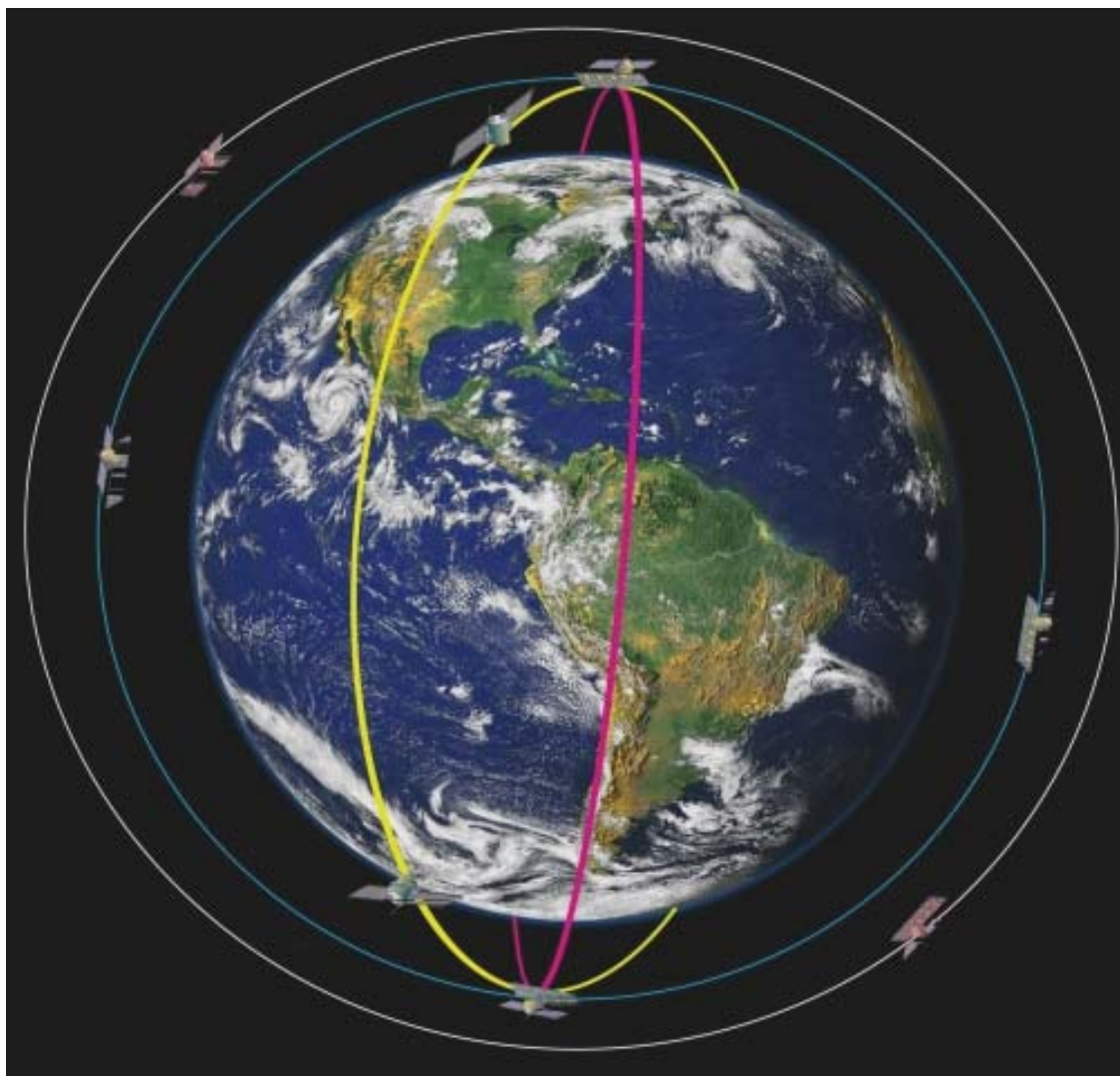




SAOCOM Mission



SAOCOM / COSMO-Skymed (SIASGE)

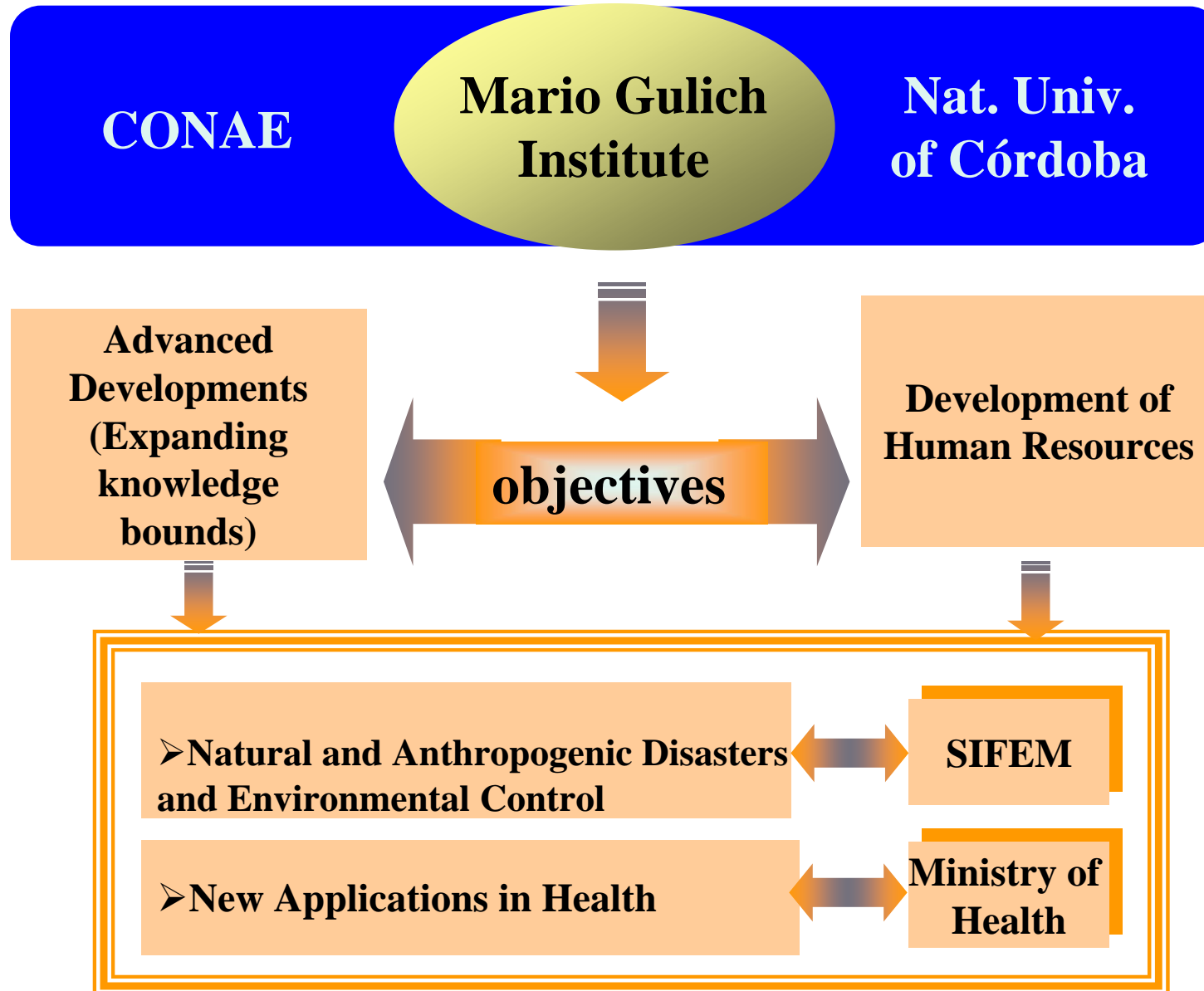


Orbits shown: 4

Angular Distribution:
Approx. 30 degrees
between orbital
planes.

4 SAR X Band (Italy)
2 SAR L Band (Arg)

Revisit Time (400 km
swath):
12 hours

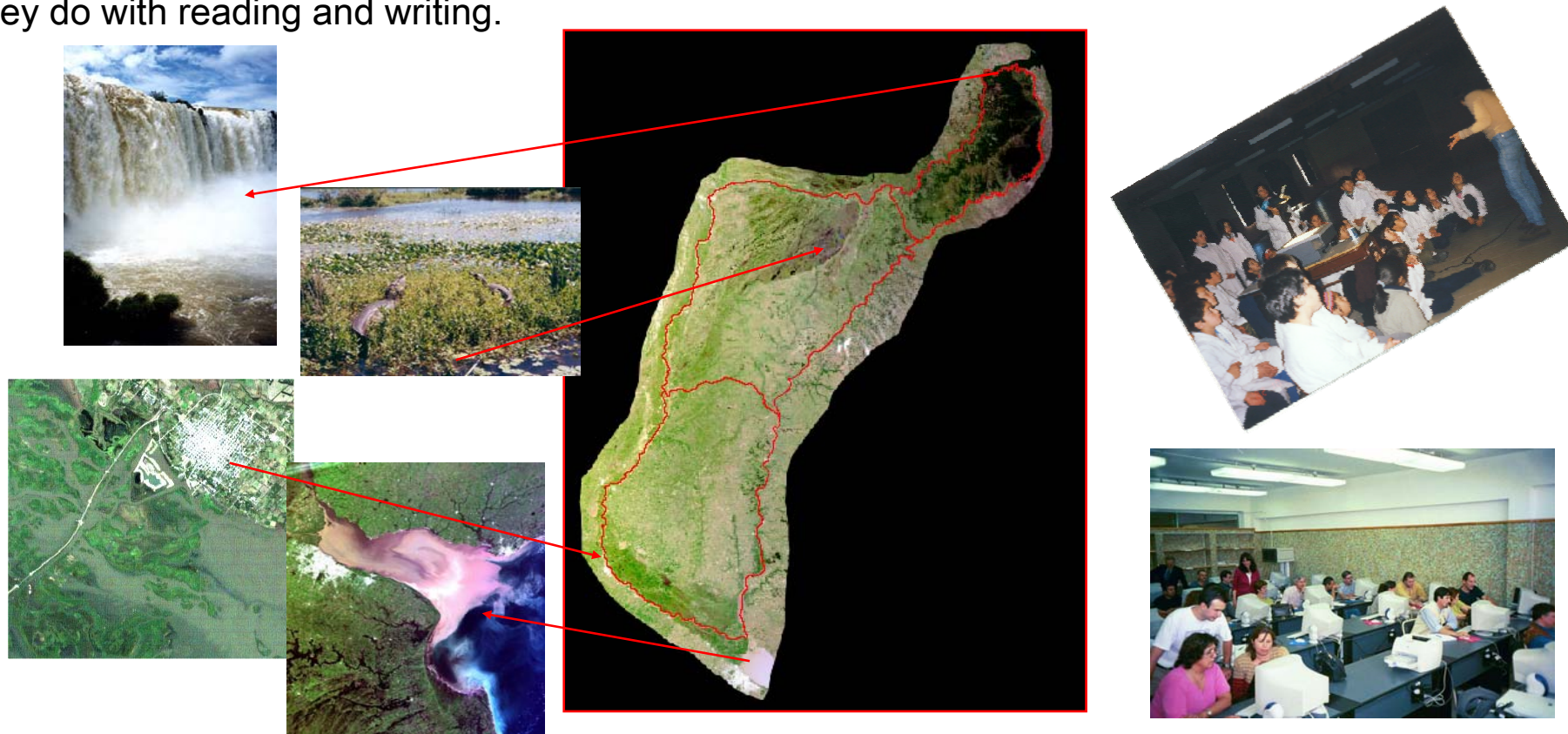


R&D Program with Application to Emergencies

- **Environmental Studies**
 - **Meteorological and Oceanic Studies**
 - **Advanced Computing:**
 - **Modelling and Simulation, Particularity applied to emergency situation related to the use of space information**
 - **Participation of Italian Universities and ASI**
-

SATELLITE IMAGES FOR SCHOOL

As one of its goals, the Space Program is intended to make two million children and teenagers aged from 8 to 16 use this information on a daily basis, in a 7-year period, for their school chores (in geography, history, environment, regional production activities, local insertion at provincial and regional levels, etc.), to later apply such knowledge to their productive lives, as they do with reading and writing.



Argentine Mesopotamia mosaic built with 4 SAC-C images that is distributed in schools to make recognition and environmental studies

With reference to the concept of international cooperation, in our opinion it has to be an associative cooperation in order to be effective.

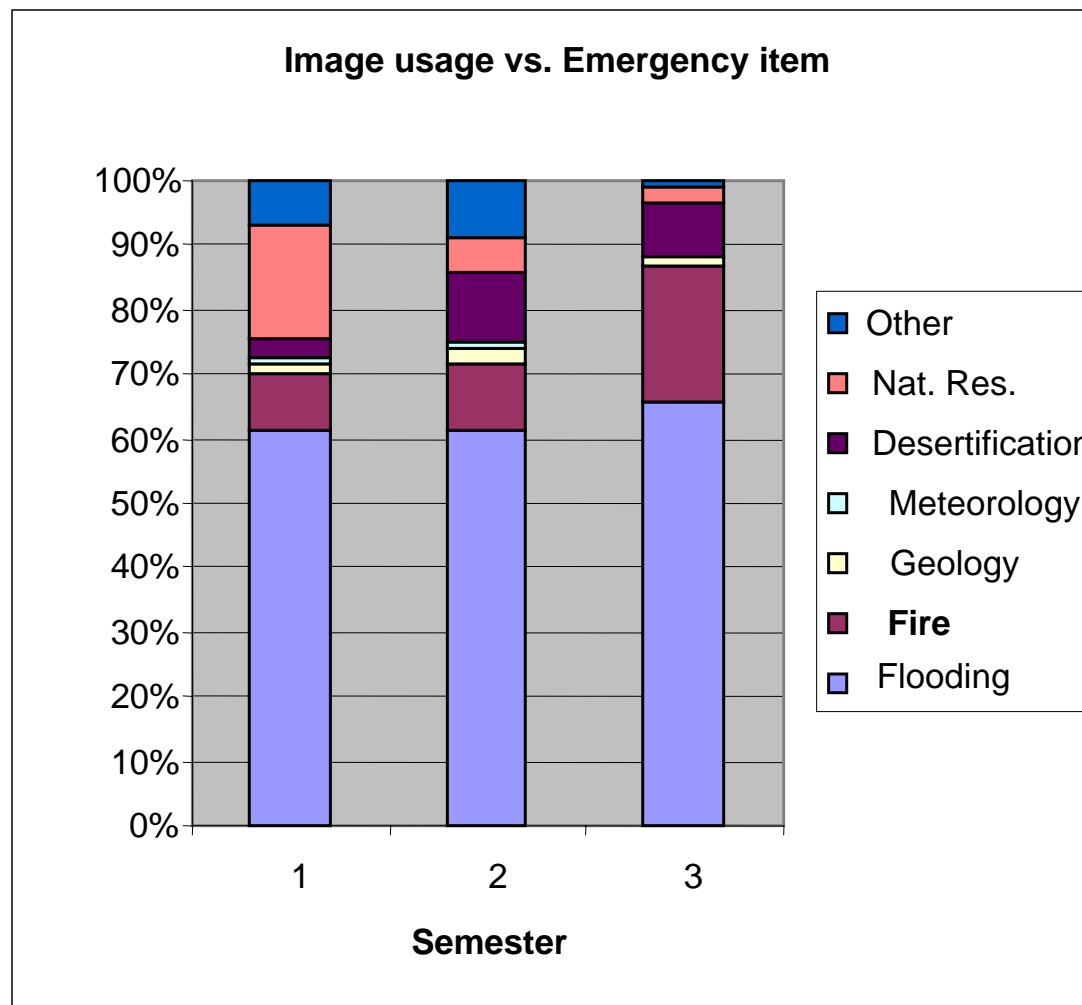
Space Information System for Emergency Management

- Created by CONAE in 1998
- Provides space information for early warning, prevention, crisis monitoring and recovering.
- The users of the information work at the National, Provincial and Municipal levels.
- Frequent users are the Agricultural and Water agencies, as well as the National Park Administration and the Fire National Management Plan.
- Both the recently downloaded data and the archived data are permanently available for the users.

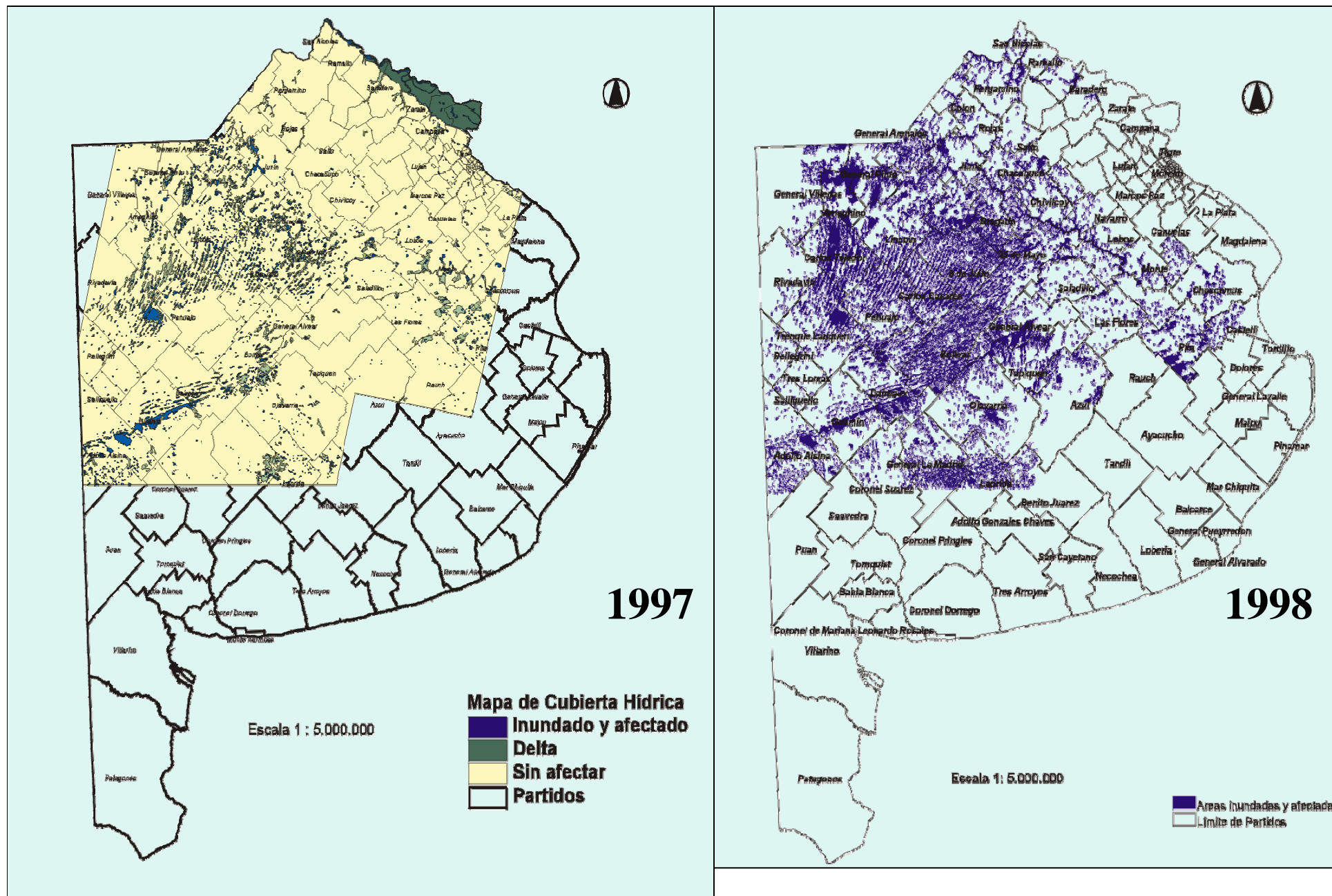
- **Web based system** to receive users request.
- **A unique procedure to obtain images** for emergency mgmt.
- The system is conceived as a **“fast track” channel**.
- The **time needed** to register **an institution** is roughly **10 minutes**.
- The **time needed** to register **a project** is roughly **2 hours**.
- The **signed docs** are sent by **fax**.
- **If an emergency suddently appears, a phone call is enough.**

**The feedback for CONAE are the reports on image usage
that we publish later at CONAE Web Page**

- Until December 2006 there are 224 registered institutions.
- Until December 2006 there are 236 registered projects.
- The higher demand is on images for flood mgmt.

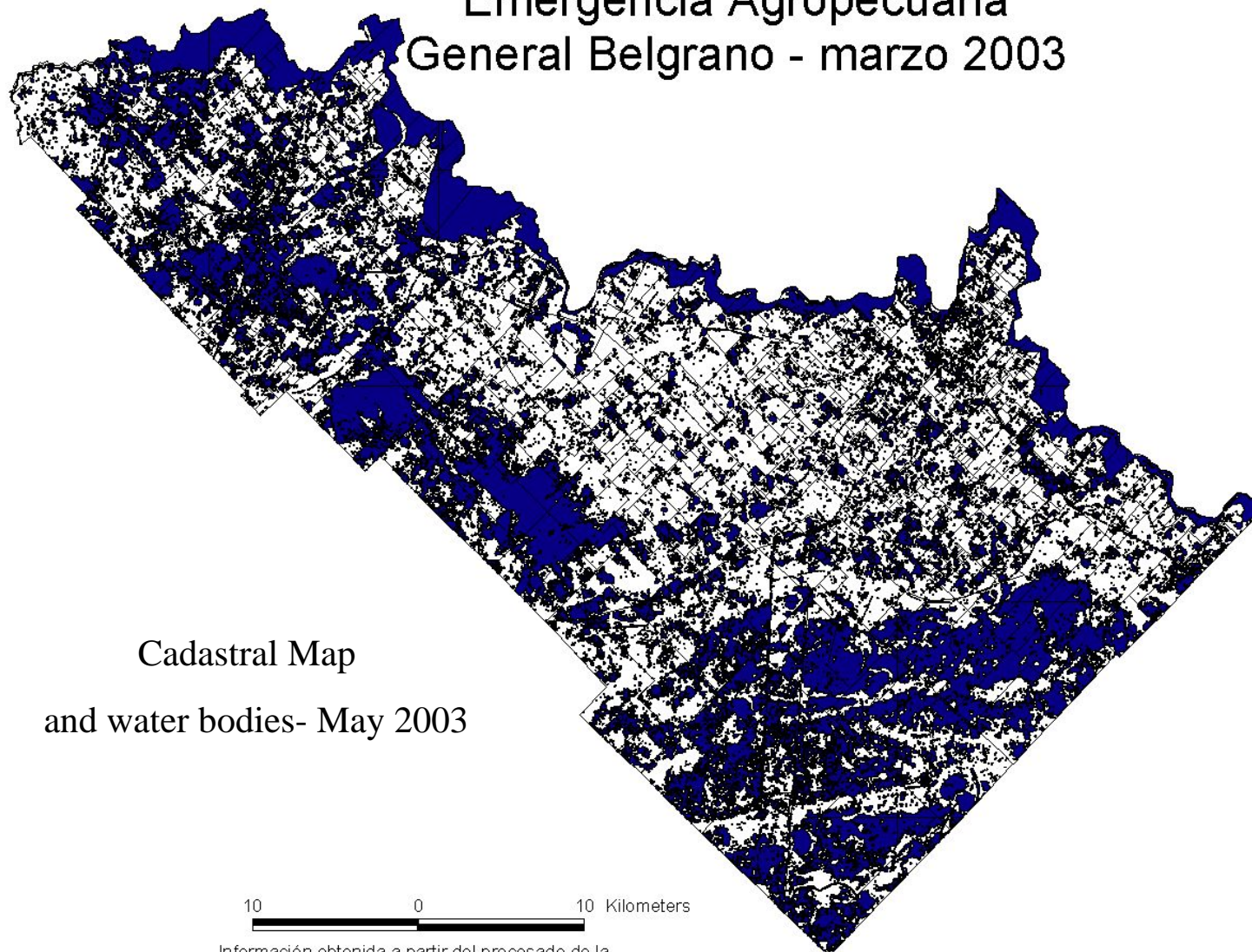


Creating digital maps for multitemporal analysis



BUENOS AIRES PROVINCE - GENERAL BELGRANO DEPARTMENT

Emergencia Agropecuaria General Belgrano - marzo 2003



Cadastral Map
and water bodies- May 2003

10 0 10 Kilometers

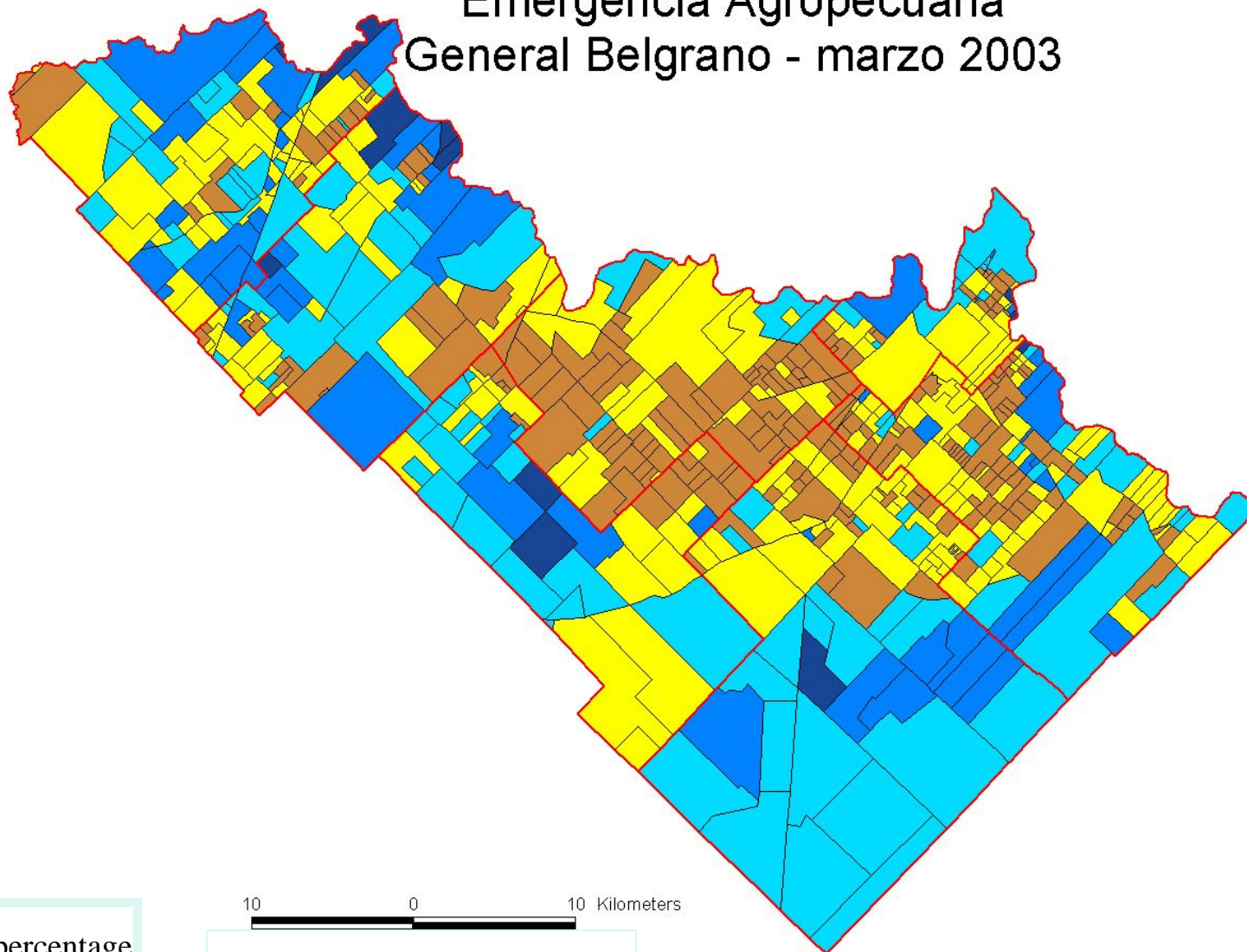
Información obtenida a partir del procesado de la
escena 225/85 (Landsat ETM+), 16 de marzo 2003

LEYENDA
Ubicación de cuerpos de agua
□ Límite predial
■ Cuerpos de agua

Autor: Ing. Agr. Pablo Vázquez MSc.
U. O. Cuenca del Salado - INTA



BUENOS AIRES PROVINCE - GENERAL BELGRANO DEPARTMENT
Emergencia Agropecuaria
General Belgrano - marzo 2003



Water percentage



Autor: Ing. Agr. Pablo Vázquez MSc.
 U. O. Cuenca del Salado - INTA





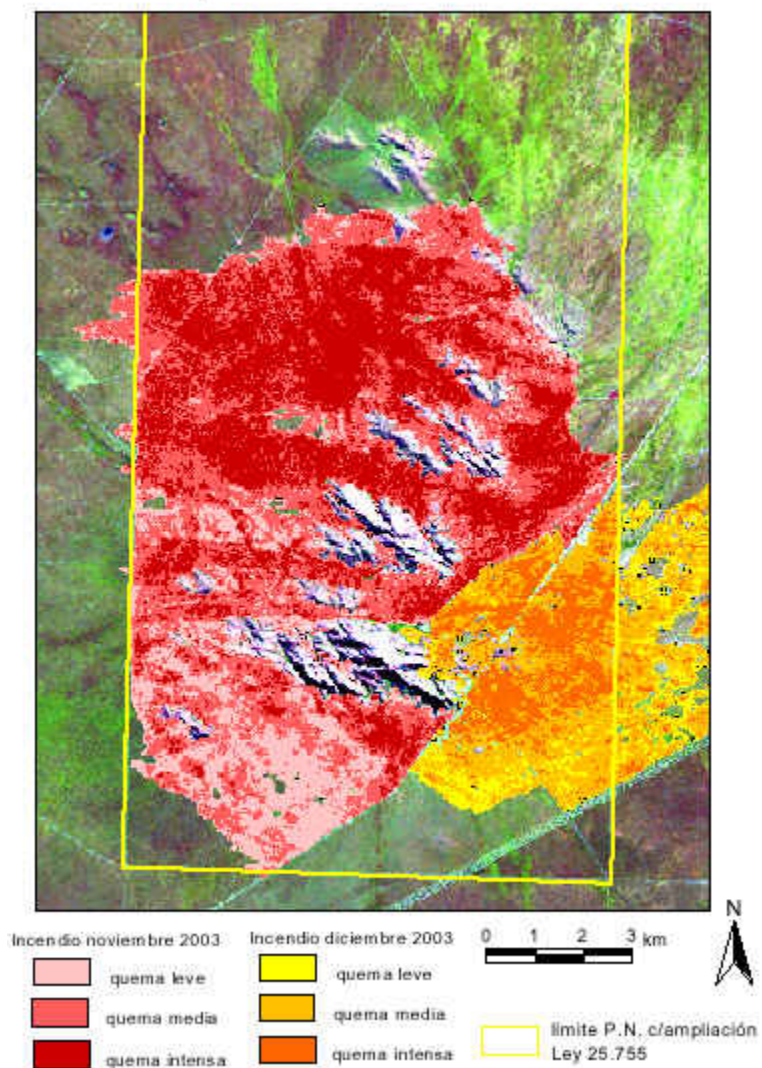
PARQUE NACIONAL LIHUE CALEL

Informe sobre las consecuencias ecológicas de los incendios ocurridos en noviembre y diciembre de 2003



ADMINISTRACION DE PARQUES NACIONALES
Marzo de 2004

MAPA N° 4: P.N. Lihue Calel - Incendios nov-dic 2003
Severidad de quema





HOT SPOT DETECTION – FOUR TIMES A DAY

FREE ACCESS THROUGH OUR WEB PAGE



Gestión de emergencias - Microsoft Internet Explorer

Archivo Edición Ver Favoritos Herramientas Ayuda

Atrás Dirección http://www.conae.gov.ar/WEB_Emergencias/Links Ir Vínculos

Google Ir Configuración Y! Search Web

CONAE

Información espacial para la gestión de emergencias

CONAE > Emergencias Ambientales

- Síntesis de situación
- Focos detectados con AVHRR
- Focos detectados con MODIS
- Imágenes LANDSAT
- Humedad del suelo
- Registro de actualizaciones
- Archivo histórico

A satellite map of South America is displayed, showing the continent's outline and surrounding oceans. Numerous red dots are scattered across the landmass, indicating detected hotspots. The map is overlaid with a grid. On the left side of the map, there are icons for saving, printing, and other functions. The bottom of the browser window shows the Windows taskbar with the Start button, open applications (GABRIEL_PLATZ..., Internet Exp..., Microsoft Power..., Jasc Paint Shop ...), and the system clock (05:34 p.m.).

Regional training course for PMs



Regional training course for PMs

**Brenda
Jones
USGS**



Regional training course for PMs

Francesco

Sarti

ESA



Regional training course for PMs

**Roberto
González
CONAE**

**Miroslava
Morán
Panamá
CATHALAC**



Curso regional para PMs

**Gustavo
Cabrera
CONAE**

**Alejandra
Riquelme
Reyes
Chile**



Relationship with CP agencies (Chile)



NDA signature (2)





INTERNATIONAL CHARTER 'SPACE AND MAJOR DISASTERS'

NON-DISCLOSURE AGREEMENT

The Recipient (s) of the International Charter 'Space and Major Disasters' data will commit to the following conditions:

- a) The data property rights are reserved solely for the concerned Charter Party/Partner Agency, regardless of the location, or the form of the data.
- b) All data are made available to others on a right to use basis only and on the condition that the Recipient(s) ensure(s) that the data shall not be distributed to any Third Party in any form or manner, or used in ways other than those for which the data were provided, without the written consent of the Charter Party/Partner Agency or its designate.
- c) The data are provided for the purpose of meeting the objectives of the Charter, and as these shall not be copied or saved in any form or medium and shall remain the property of the Charter Party/Partner Agency.
- d) All data and data products shall be clearly marked with the applicable Copyright inscriptions.
- e) The data use by the Recipient(s) is subject to data distributor's licensing agreement that accompanies the data delivery.
- f) The data are made available to the Recipient(s) without any assurance or warranty that the data product and the information derived meet the intended needs of the Recipient(s). Moreover, the Charter Parties/Partner Agencies shall accept no liability of actions, decisions and circumstances resulting from the use of these data products and information.
- g) The Charter Parties/Partner Agencies reserve the right of use and demonstration of all and any of the results and promotional products that are derived from the data.



[Signature]
CARMEN FERNANDEZ GIBBS
DIRECTORA NACIONAL
OFICINA NACIONAL DE EMERGENCIA
MINISTERIO DEL INTERIOR

13 mayo 2007

NDA Signature CATHALAC – SERVIR and Costa Rica University



THANK YOU!